

**REMARKS**

Reconsideration of this application is respectfully requested.

Claims 1-5 and 11-18 are pending in the application. Upon entry of this Amendment, claims 1 and 17 will be amended and new claims 19 – 22 will be added.

In the outstanding Office Action of September 14, 2006, the Examiner rejected claims 1, 5 and 11 under 35 U.S.C. §102(b) as being anticipated by Ichikawa et al. (USP 5,540,683). The Examiner further rejected, as being unpatentable under 35 U.S.C. §103(a), claims 1-3, 5, 11, 17 and 18 over Panescu et al. (USP 6,165,169 ) in view of Ichikawa et al. ('683), claim 4 over Panescu et al. ('169) and Ishikawa et al. ('683) as applied to claim 3, and further in view of Quinn et al. (USP 5,720,293), and claims 12-16 over Ichikawa et al. ('683) in view of Shlain (USP 5,460,629). The Examiner's rejections are respectfully traversed.

For a claimed invention to be anticipated by a prior art reference, every element of the claim must be disclosed in the reference. For a claimed invention to be obvious over a combination of prior art references, there must be some suggestion, motivation or teaching in the prior art that would have led one of ordinary skill in the art to combine the references to produce the claimed invention. *E.g., Ashland Oil, Inc. v. Delta Resins & Refracs.*, 776 F.2d 281, 293 (Fed. Cir. 1985). In this regard, the Federal Circuit has warned against using a claimed invention as a "blueprint" for piecing together elements in the prior art to defeat the patentability of a claimed invention:

As this court has stated, "virtually all [inventions] are combinations of old elements." . . . Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability."

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*In re Rouffet*, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). (Citations omitted). The Federal Circuit has identified three possible sources for a motivation to combine references:

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the matter claimed. This court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.

*Id.* at 1457-58 (Fed. Cir. 1998).

Here, the Examiner is using the claims of the present application like a blueprint for piecing together elements from a number of references in an attempt to defeat the patentability of such claims. However, even assuming, *arguendo*, that the Examiner properly combined the cited references, the result would still not be the invention as described in the rejected claims of the present application.

Each of amended independent claims 1, 12, 15 and 17 and newly-added independent claim 21 recite an electrosurgical instrument including at least two electrodes and a switching circuit that is operated to supply a cutting RF wave form between a first pair of electrodes of the electrosurgical instrument's electrodes and a coagulating RF wave form between a second pair of the electrosurgical instrument's electrodes, where an identification element carried by the electrosurgical instrument indicates that the instrument includes at least three electrodes, and to supply both the cutting RF wave form and the coagulating RF wave form to the same pair of the electrosurgical instrument's electrodes, where the identification element indicates that the instrument includes only two electrodes. Support for the amendments to independent claims 1, 12, 15 and 17 appears at least at page 7 line 29 to page 8 line 25, and Figures 2 and 5A and 5B of the present application, as originally filed.

In his rejections of claims 1, 5 and 11, under §102(b), as being anticipated by Ichikawa, and of claims 12 – 16, under §103(a), as being unpatentable over Ichikawa in combination with Shlain, the Examiner argues that Ichikawa provides an electrosurgical system including a generator 20 for generating RF energy, an instrument 42 having at least two electrodes and an identification element that identifies the instrument, including the number of electrodes, defined as either bipolar or monopolar. The Examiner also stated that the generator has an RF output stage, which he identifies as connectors 130, 132 and 162, and a switching circuit 75c that couples at least two outputs to the electrodes being used. Finally, the Examiner states that a sensing circuit, identified by the Examiner as 78a, 78b and 78c, identifies the instrument. 9/14/06 Office Action, p. 2.

Ichikawa does disclose a high frequency cauterizing apparatus 10 that includes a high frequency power supply 20, a high frequency medical treatment instrument 30 with an instrument-side electrode (active electrode) 42 to be put in contact with a patient's "affected part" to be treated, and a patient-side electrode 40 electrically connected to the power supply 20 via a connection cable 41. Thus, the treatment instrument is not item 42, as stated by the Examiner, but rather item 30. Item 42 is not an instrument having "at least two electrodes", as argued by the Examiner. Rather, item 42 is the active electrode of medical treatment instrument 30, which is described as a monopolar type instrument that is combined with the patient-side electrode plate 40 to perform cauterizing treatment on the "affected part". Ichikawa, col. 5, ln. 64 to col. 6, ln. 7.

The instrument 30 is connected to the power supply 20 via a connection cable 50. The HF power supply 20 includes an active connector 130 for connection with the cable 50 to the treatment electrode 42 of instrument 30 and a patient connector 132 for connection with the cable 41 coupled to the patient-side electrode 40. A connector 51, located at the end of cable 50, serves as a detection means. The connector 51 is coupled to an identifying connector 31 serving as a detection means of the treatment instrument 30. Ichikawa, col. 6, lns. 10-15.

Figures 6-8 of Ichikawa show a detection circuit 78a that identifies the type of HF treatment instrument 30 connected to the connector 51. As shown in Figure 6, a drive circuit 82

includes the detection circuit 78a, a converter circuit 72 for converting an identification signal from the detection circuit 78a to a predetermined mode signal capable of activating a drive circuit 82, a control circuit 74 for generating a drive signal based on the signal from the converter circuit 72 and delivering it to a high frequency oscillation unit 75, which oscillates a high frequency output based on the drive signal from the control circuit 74. The oscillation unit 75 includes a wave form generator 75a, a power amplifier 75b and a switching circuit 75c for selectively delivering the high frequency output to the monopolar instrument, such as instrument 30, or a bipolar instrument, such as instrument 90. A memory in control circuit 74 stores optimal output conditions for the various high frequency instruments 30. Thus, if an instrument 30 is identified by the detection circuit 78a, the resultant ID signal is converted to a control signal by the converter 72, and based on this control signal, the control circuit 74 reads out the optimal output condition of the associated treatment instrument from the memory and controls the oscillation unit 75 so that the high frequency output may meet the optimal output condition. *See*, Ichikawa, col. 7, lns. 35-40 and ln. 62 to col. 8, ln. 7.

The HF power supply 20 also includes a connector 62 cited by the Examiner that is used with an alternative embodiment that is a high frequency treatment instrument 90 of the bipolar type. *See, e.g.*, Ichikawa, col. 9, lns. 45-48. A third embodiment disclosed by Ichikawa, but not cited by the Examiner, uses a power supply 101a that is provided with two output means, *i.e.*, a bipolar output means 135 and a monopolar out means 136. *See, e.g.*, Ichikawa, col. 11, lns. 15-21. In the second embodiment, an identifying connector 61, which constitutes part of a connection unit 60, is provided at a distal end portion of the connection cable 50 extending from the high frequency treatment instrument 90. When the identifying connector 61 is coupled to the connector 62, an ID signal is transmitted to a detection circuit 78c in the high frequency power supply 20. When the detection circuit 78c identifies the type of instrument 90, it feeds an output signal to the control circuit 74 via a converter circuit 73, at which point operations of the second embodiment are the same as those of the first embodiment. *See* Ichikawa, col. 9, ln. 60 to col. 10, ln. 28.

Ichikawa does not disclose a switching circuit that supplies a cutting RF wave form between a first pair of an electrosurgical instrument's electrodes and a coagulating RF wave form

between a second pair of the instrument's electrodes when an identification element carried by the instrument indicates that the instrument includes at least three electrodes, and to supply both a cutting RF wave form and a coagulating RF wave form to the same pair of electrodes of an electrosurgical instrument where the identification element indicates that the electrosurgical instrument includes only two electrodes. Rather, the function of Ichikawa's mating identifying connectors 31 and 51 is to determine what type of monopolar instrument 30 is being connected to power supply 20 so that the "optimal output condition" for that particular monopolar instrument 30 (*see, e.g.*, instruments 30a, 30b, 30c, 30d depicted in Figure 6) can be output to connector 130 for connection to active electrode 42 of instrument 30 and patient connector 132 for connection to patient electrode plate 40. *See, e.g.*, Ichikawa, col. 7, ln. 45 to col. 8, ln. 7. In this regard, Ichikawa never identifies a monopolar instrument 30 with more than one electrode, *e.g.*, active electrode 42, since electrode plate 40 is not part of instrument 30. As such, switching circuit 75c shown in Figure 6 always feeds the high frequency output to an active electrode, like electrode 42, of a monopolar instrument, like instrument 30.

Likewise, the function of Ichikawa's mating identifying connectors 61 and 62 is to determine what type of bipolar instrument 90 is being connected to power supply 20 so that the "optimal output condition" for that particular bipolar instrument 90 can be output to connector 62 for connection to bipolar electrodes 91 of instrument 90 which are separated by insulator 96 (*see, e.g.*, Figures 13 and 14). Here again, in this regard, Ichikawa never identifies a bipolar instrument 90 with more than two electrodes, *e.g.*, electrodes 91 separated by insulator 96. As such, switching circuit 75c shown in Figure 6 always feeds the high frequency output to the same bipolar electrodes, like electrodes 91, of a bipolar instrument, like instrument 90.

In both instances, the identification elements of Ichikawa do not perform the function of assisting in controlling a switching circuit to supply a cutting RF wave form between a first pair of an electrosurgical instrument's electrodes and a coagulating RF wave form between a second pair of the instrument's electrodes, where an identification element carried by the instrument indicates that the instrument includes at least three electrodes, and to supply both a cutting RF wave form and a coagulating RF wave form to the same pair of electrodes of an electrosurgical instrument, where the identification element indicates that the electrosurgical instrument includes

only two electrodes, as recited in independent claims 1, 12, 15, 17 and 21 of the present application.

In his rejection of claim 12 – 16, under §103(a), as being unpatentable over Ichikawa in view of Shlain, the Examiner notes that Shlain discloses various arrangements for electrodes, including multiple electrode hooks, and then simply argues that combining Shlain with Ichikawa provides the Ichikawa system “with a multiple hook endoscopic device for the RF treatment of tissue would have been an obvious consideration for one of ordinary skill in the art.” Thus, the Examiner fails to look to one of the motivations for combining references identified by the Federal Circuit. But, even assuming, *arguendo*, that the Examiner properly combined Shlain with Ichikawa, the result would still not be the electrosurgical system described in the rejected claims noted above.

Shlain discloses an electrosurgical probe including an elongate probe body having a surgical hook at a distal end thereof and a paddle element reciprocatably mounted within the distal tip of the elongate body so that it can be shifted between an extended position where it covers the hook tip and a retracted position where it leaves the hook tip exposed. The paddle cooperates with the hook in tissue dissection, cleaning the hook, and providing an alternate electrosurgical probe tip for use in electrosurgical procedures. Thus, given the deficiencies in the teaching of Ichikawa noted above, clearly, Ichikawa does not anticipate amended independent claim 1 or dependent claims 5 and 11, which depend from claim 1. Nor does Ichikawa, either alone or in combination with Shlain, render obvious amended independent claims 12 and 15 or dependent claims 13, 14 and 16, which depend from such claims.

In his rejection of claims 1 – 4, 5, 11, 17 and 18, under §103(a), as being unpatentable over Panescu, in combination with Ichikawa alone, or further in view of Quinn, the Examiner asserts that Panescu discloses an electrosurgical system comprising a generator 176 for generating RF energy, an electrosurgical instrument 10 that includes several electrodes and an identification element 170 carried by the instrument 10 for identifying “numerous parameters of the instrument, including the number of electrodes”, citing, col. 3, lns. 15-20 of Panescu. The Examiner also asserted that a sensing circuit 178 senses the identification element “and works in concert with the signal processor to deliver the appropriate energy to the electrodes.” The signal

processor 174, the Examiner also asserts, “varies the signal supplied to the RF output lines based on the sensed identification code”. 9/14/06 Office Action, p. 3. In fact, the Panescu identification scheme does not function as asserted by the Examiner. Rather, Panescu teaches that the identification component 170, which carries the assigned identification code of a particular structure, is coupled to an external interpreter 178 when a probe 10 is plugged into a control unit for use. Panescu, col. 26, lns. 15-27. Panescu further teaches that the control unit 122 can incorporate a signal processor 174 and an interpreter 178 that interprets the coded component 170 to match the code of the component with codes contained in a pre-established master table 180 of codes. The interpreter 178 then displays for a physician in understandable alpha/numeric format the physical, mechanical, and functional characteristics of the structure 20 that the code signifies in the table 180. Panescu, col. 26, lns. 34-43. The control unit 172 can also include functional algorithms 188 coupled to the processor 174 or generator 176, which set operating parameters based on the code of the coded component 170. These operating parameters are discussed, for example, at column 26, lines 44-62 of Panescu. As correctly noted by the Examiner in the outstanding Office Action, there is no express disclosure in Panescu of connection and switching circuitry based on the identification code carried by an instrument’s identification element 170. To compensate for this deficiency in Panescu’s teachings, the Examiner again looks to Ichikawa. But, here again, for the reasons discussed above, Ichikawa does not disclose an identification system for controlling a switching circuit that is operated to supply a cutting RF wave form between a first pair of electrodes and a coagulating RF wave form between a second pair of electrodes of an electrosurgical instrument, where an identification element indicates that the electrosurgical instrument includes at least three electrodes, and supplying both the cutting RF wave form and the coagulating RF wave form to the same pair of electrodes of the electrosurgical instrument, where the identification element indicates that the electrosurgical instrument includes only two electrodes.

Thus, clearly, Panescu, in combination with Ichikawa, does not render obvious amended independent claims 1 and 17, and dependent claims 2, 3, 5, 11 and 18, which depend from such claims, as argued by the Examiner.

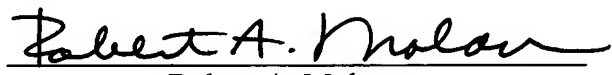
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In his rejection of claim 4, under §103(a), as being unpatentable over Panescu and Ichikawa, and further in view of Quinn, the Examiner notes that Quinn discloses an identification means which can be resistors, capacitors and inductors to identify a device, and then simply argues that combining Quinn with Panescu and Ichikawa to provide a system in which an inductor is the identification means would have been an obvious alternative. Thus, here again, the Examiner fails to look to one of the motivations for combining references identified by the Federal Circuit. Nevertheless, the portion of Quinn cited by the Examiner is not concerned with an identification element for identifying the number of electrodes an electrosurgical instrument has, but rather the calculation of cardiac output using a thermodilution catheter and an associated processing system, and knowing, among other things, certain properties about the corresponding measuring transducer used, such as a thermistor or thermocouple. To reduce the errors which would be introduced into a calculation of cardiac output due to certain variances, Quinn teaches the use of a coding technique using previously calibrated thermistors or thermocouples and a calibration circuit that includes passive electronic components, such as resistors, inductors and capacitors, with values corresponding to a particular calibration value or number according to a predetermined table. *See* Quinn, col. 8, ln. 62 to col. 9, ln. 31. In view of this, even assuming, *arguendo*, that the Examiner properly combined Quinn with the Panescu and Ichikawa, it is clear that the result would still not be the electrosurgical system described in the rejected claims noted above.

In view of the foregoing, it is believed that all of the claims pending in the application, *i.e.*, claims 1 – 5 and 11 – 22, are now in condition for allowance, which action is earnestly solicited. If any issues remain in this application, the Examiner is urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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